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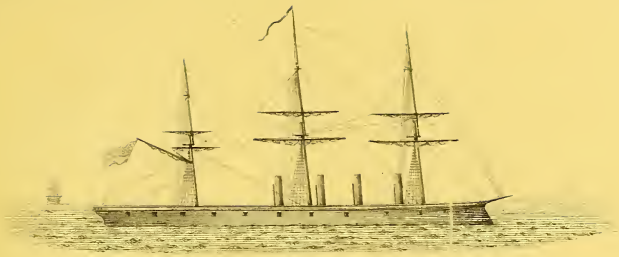

MEMORIAL

OF THE

U.S. NAVAL ENGINEERS,

TO THE

XXXVIIth CONGRESS

FIRST SESSION.

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MEMORIAL

OF THE

U. S. NAVAL ENGINEERS

TO THE

HONORABLE SENATE AND HOUSE OF REPRESENTATIVES

IN CONGRESS ASSEMBLED.

May it please your Honorable Bodies—

We, the Engineers of the Navy of the United States, respectfully show:

That previous to the Great Rebellion, this country maintained but a small Navy—serving only for a nucleus, from which has been formed, with a rapidity unparalleled in the history of the world, a naval force which commands the respect of the great European powers. If, when the Rebellion is crushed, we are to return to the old policy of an

insignificant Navy—one which will permit a civil or a foreign war to assume gigantic proportions while we are preparing our ships with their armaments and crews, as in the present war, instead of being able to crush the enemy at his first onslaught —it may not be of the greatest importance to give serious attention to the subject of securing the best talent which the country is capable of producing, for guiding the construction and management of our national ships.

But if, as we believe will be the case, we decide to maintain a naval force which will always be ready to repel successfully the most powerful attacks upon our peace and our liberties which it is possible to bring from any quarter, this question of procuring and employing the highest order of talent of which the country is capable, for directing the construction and the management of our national ships, assumes at once the gravest importance.

It needs but little demonstration to convince the intelligent men of whom your Honorable Bodies are composed, that upon the Engineers who govern the construction of any Navy will devolve the task of giving power and *prestige* to the *matériel* of any such Navy which will hereafter be maintained. We do not wish, in stating this, to under-

value in the slightest the great importance of those who will command and fight our vessels. The advantages of employing men of a high sense of honor and great abilities in those positions are well understood, and have been universally and long recognized.

But what will it avail any country, permit us to ask, to send out its ships officered and manned with the bravest and most skilful commanders and crews, if the enemy of that country dispatch to meet them ships of greater offensive and defensive powers—ships having greater speed, greater impenetrability, and greater power of ordnance?

The introduction of steam and of armored ships has thrown the responsibility of the speed and the impenetrability of our ships upon the engineer. It is true that the Government avails itself of the talents of engineers in civil life, and that some of the best designs of ships and machinery of which our Navy boasts have emanated from such engineers; but it is also true that the Government depends upon its own officers to advise it with respect to the excellence of the civilians' plans submitted to it, and afterwards to attend to their proper and faithful execution.

Ours is the only Navy in the world possessing a corps of engineers to whom are intrusted the de-

termination of the amount and character of the steam-power with which our vessels shall be fitted, its detail design, the superintendence of its construction, and its management at sea. To the steam-machinery are now being added iron ships, and the armoring of iron and wooden ships.

All the great powers, ourselves included, are at present striving each to secure the most effective iron-clad fleets; the expenses thus incurred by each are very great. It is not, however, the one which will expend the most treasure, but the one which builds upon the plans best adapted to the end in view, that will finally "rule the waves." That is to say, the supremacy of the sea has become reduced to a mere engineering question; and, consequently, that country which employs the best engineers will have the best ships, and be the victors in all future naval wars,—unless, indeed, the inferior ships be commanded and manned by officers and men of superior skill and bravery—the very character of men deserving of the best vessels.

Believing, as we do, that we number among us members who possess genius and talents of a very high order, and who, if retained in the service of the Government, will always be adding to the *prestige* of our Navy, keeping it always in advance of that of any other nation, we make bold to express

the belief that the surest mode of retaining them, or of securing their equals in the future, is to increase their pay to a point which will leave no inducement to resign from the Government service.

Commanding officers win fame and renown by success in battle; for this they must necessarily remain in the Government service: but the fame of the engineer is the same, whether his genius and talents are devoted to the ships of the nation, or to those of the commercial marine.

When, therefore, he is not restrained by his patriotism, or the power of the Navy Department, as now in time of war, he will naturally choose the service to which the best salaries are attached.

The present pay of naval engineers is graduated just high enough to prevent resignations with the view to following the sea in merchant-ships, but entirely too low to prevent our most able members from resigning with the view of joining steam-engine and ship-building establishments; and it could easily be shown that the entire pay of the whole engineer corps for one year, at the rate which we would recommend to be paid, and which would almost wholly prevent such resignations, would amount to less than the sum which the Government would save by building one important ship upon a superior plan.

It may be possible that some of us would receive higher salaries than we should deserve; but that is always the case in every organization, and it cannot be remedied. It is equally as true now, with our present rates of pay, as it will be twenty years hence, if they are increased to those hereinafter suggested. The higher the salaries, the greater will be the inducement for young men of ability and liberal acquirements to enter and remain in the corps. Thus will the average be improved, and the most able retained.

The rates of pay which we take the liberty to ask for, and indeed to recommend, are as follow:

DUTY-PAY.

	PER ANNUM.
Chief of Bureau of Steam-Engineering . .	$5,000
Chief Engineers of fifteen years' standing, and Fleet-Engineers	4,000
Chief Engineers of ten years' standing . .	3,500
Chief Engineers of five years' standing . .	3,000
Chief Engineers under five years	2,500
First-Assistant Engineers	1,800
Second-Assistant Engineers	1,200
Third-Assistant Engineers	900

LEAVE-PAY.

Three-fifths of the above rates.

We beg leave respectfully further to add the request, that the assimilated rank of Engineers, now fixed by regulation of the Navy Department, be confirmed by Congress; and to express the belief that efficiency would be promoted by enacting that First Assistants be appointed by commission from the President, by and with the advice and consent of the Senate, and that they be privileged to mess in the ward-room of ships-of-war.

THE ADDITION OF A HIGHER GRADE.

It has always been found that the greater the number of grades, and the consequent more frequent promotions of the members of any organization, the greater is their *esprit du corps;* and every thing which tends to stimulate this, increases the attachment to it of its best members, and is therefore equivalent, to a certain extent, to an increase in the salaries paid.

The Secretary of the Navy, in his recent annual report, has asked that the action of the Department, in assigning to the oldest Engineers in each squadron the duty of Fleet-Engineer, be legalized by Congress.

We beg leave to express our appreciation of this action on the part of the Honorable Secretary, as we consider that it adds immensely to the efficiency of any steam-fleet to have all its engineers accountable to, and all its machinery examined from time to time by, one able head. We are of the opinion, however, that efficiency would be promoted, and the *esprit du corps* of the entire organization augmented, if Congress should enact that the *Fleet-Engineers* be appointed by commission from the President, by and with the advice and consent of the Senate.

As this grade would be filled with the most experienced and able engineers at the command of the Department, the number should be sufficient not only to furnish one to each fleet afloat, but also to fill the most responsible positions on shore, for which a certain number of the most experienced engineers are always required.

EDUCATION OF ENGINEERS.

We have long felt the disadvantages we have labored under as a body, in not having, anywhere in the country, proper schools for thoroughly educating naval engineers to their profession; and it

has been with peculiar pleasure that we find the present Honorable Secretary of the Navy appreciating the importance of the subject-matter of this Memorial so much as to recommend at some length, in his recent annual report, that provision should be made to supply this deficiency.

The Navy Department has, during the past eighteen years, paid considerable attention to the educational acquirements of its engineers.

The regulations respecting their admission and promotion to the various grades, have not only required that they should be practical mechanics, and experienced in sea-service, but that they should be well grounded in mathematics and natural philosophy, and familiar with the principles and practices of their profession; strict examinations, by Boards of Chief Engineers, giving constant vitality and force to those regulations.

The advantages of thus employing men who were something more than mechanics, were not fully appreciated until this war broke out; and acting appointments were made principally from engineers of the merchant marine.

As a rule, these are mechanics like ourselves, and, like ourselves, have followed the sea in the charge of the management of steam-machinery; but whatever may be claimed by volunteer officers gen-

erally, the Navy and the Navy Department, we feel assured from our own observations, are thoroughly convinced of the advantages of educated engineers, even for the performance of sea-service.

It has been claimed by some, that naval engineers ought to be confined to the performance of the duties of running the engines at sea; and that educated persons, who never went to sea, ought to be employed by the Government for the performance of the shore-duties of determining designs, and superintending the construction of new machinery for the Navy. Nothing is, however, clearer to us, than that the experience of the sea is invaluable to the designer of all marine machinery. It is equally so to the superintendent of its construction.

To obtain these advantages for those performing these shore-duties, it is, of course, necessary to employ sea-going engineers; and, *vice versâ*, the sea-duties must be performed by men capable, by their education and abilities, of performing the higher classes of duties on shore.

We have already intimated the fact, that such men perform the sea-duties far better than would be the case if those of inferior attainments were employed for that branch only, and that such fact is patent in the Navy and Navy Department.

If, therefore, the simple fact that the care which has been exercised, in choosing our naval engineers from among those young mechanics who were possessed of some education, has been so beneficial, and has enabled the Navy Department not only to have its steam-machinery afloat, cared for, and managed in a superior manner, but to have its new machinery designed and superintended in its construction by men who were experienced in its management, and familiar with the construction upon which successful performance depended,—it is evident that, to take these same young mechanics and give them a thorough professional education, and then send them to sea, would add greatly to their value in every position in which they would be placed by the Government.

In conclusion, permit us to express the opinion, that whatever may be maintained by any who may traduce us to your Honorable Bodies, either by attacking individuals among us, or by wholesale condemnation, the economy and efficiency of our Naval Steamers will be increased by the encouragement which will be given to superior skill and talents to enter and remain in the Engineer Corps of the Navy, if the legislation is had which we humbly ask for in this our Memorial.

Signed for the Corps.

WM. W. W. WOOD,	Chief Engineer	U. S. N.	
GEO. SEWELL,	"	"	"
JAMES W. KING,	"	"	"
JOHN P. WHIPPLE,	"	"	"
ELBRIDGE LAWTON,	"	"	"
H. H. STEWART,	"	"	"
ALBAN C. STIMERS,	"	"	"
JOHN FARRON,	"	"	"
ANDREW LAWTON,	"	"	"
ED. S. DE LUCE,	"	"	"
THOS. A. SHOCK,	"	"	"
CHAS. H. LORING,	"	"	"
ALEX. HENDERSON,	"	"	"
S. D. HIBBERT,	"	"	"
F. C. DADE,	"	"	"
DAVID B. MACOMB,	"	"	"
EDW. D. ROBIE,	"	"	"
THOS. WILLIAMSON,	"	"	"
WM. J. LAMDIN,	"	"	"
WM. B. BROOKS,	"	"	"
CHARLES H. BAKER,	"	"	"
P. G. PELTZ,	"	"	"
MORTIMER KELLOGG,	"	"	"
JAMES B. KIMBALL,	"	"	"
JOHN W. MOORE,	"	"	"
W. H. RUTHERFORD,	"	"	"
WM. ROBERTS.	"	"	"

January, 1864.

INDORSEMENT.

We, the undersigned Engineers, Ship-builders, and Manufacturers of Steam-Machinery, cordially indorse the foregoing Memorial of the Engineers of the Navy. Our acquaintance with them, and our familiarity with the commercial value of the services they are constantly rendering to the Government, induce us to express freely the opinion, that the rates of pay for which they ask are quite moderate.

We also wish especially to indorse the request they make with regard to the establishment of a system for the education of the Naval Engineer, as we believe it would exert a beneficial influence upon the entire profession in this country:

J. ERICSSON, New York.
C. H. DELAMATER, Delamater Iron Works, New York.
GEO. W. QUINTARD, Morgan Iron Works, New York.
MIERS CORYELL, " " " New York.
HORATIO ALLEN, Novelty Iron Works, New York.
WM. E. EVERETT, " " " New York.
BOARDMAN, HOLBROOK & CO., Neptune Iron Works, New York.
JOSEPH BELKNAP, Supt. Neptune Iron Works, New York.

WM. H. WEBB, New York.
SECOR & CO., Fulton Iron Works, Jersey City.
M. F. MERRITT, New York.
WM. PERINE, Perine Union Iron Works, New York.
T. F. SECOR, Allaire Works, New York.
JAMES MURPHY & CO., Fulton Iron Works, New York.
JOHN ROACH, Etna Iron Works, New York.
TUGNOT, DALLY & CO., Franklin Forge, New York.
DANIEL McLEOD, South Brooklyn Steam-Engine Works, Brooklyn, N. Y.
J. B. COBB, South Brooklyn Steam-Engine Works, Brooklyn, N. Y.
HOMER RAMSDELL, Washington Iron Works, Newburg, N. Y.
HARRISON LORING, City Point Works, Boston, Mass.
DONALD McKAY, Boston, Mass.
AQUILA ADAMS, " "
HERMAN WINTER, " "
NELSON CURTIS, Atlantic Works, Boston, Mass.
GEO. B. STETSON, Bridgewater Iron Works, Bridgewater, Mass.
MERRICK & SONS, Southwark Foundry, Philadelphia, Pa.
W. CRAMP & SONS, Philadelphia, Pa.
WILLCOX & WHITING, Kaignes Point Iron Works, Camden, N. J.
REANEY, SON, & ARCHBOLD, Pennsylvania Iron Works, Chester, Pa.
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